

THE PENDING CLAIMS:

1. (Previously Presented) An electrochemical plating apparatus, comprising:
a plating cell configured to contain a plating bath below an overflow outlet;
a substrate support member positioned in the plating cell and configured to selectively contact the plating bath with a substrate secured thereto;
a fluid supply line in fluid communication with the plating cell;
a selectively actuated check valve positioned in the fluid supply line;
an anode in the plating cell; and
a bleed line in fluid communication with the plating cell at a position in the plating cell between the overflow outlet and the anode.
2. (Previously Presented) The electrochemical plating apparatus of claim 1, wherein the bleed line is positioned in a side wall of the plating cell and is configured to drain a portion of the plating bath.
3. (Previously Presented) The electrochemical plating apparatus of claim 2, wherein the bleed line is positioned in the side wall proximate a top portion of an anode positioned in the plating cell.
4. (Previously Presented) The electrochemical plating apparatus of claim 3, wherein the bleed line is configured to drain the plating cell, while leaving a sufficient amount of electrolyte in the plating cell to immerse the anode.
5. (Previously Presented) The electrochemical plating apparatus of claim 1, wherein the bleed line further comprises a selectively actuated bleed valve.
6. (Previously Presented) The electrochemical plating apparatus of claim 1, further comprising a microprocessor-type controller configured to regulate operational characteristics of the electrochemical plating apparatus.

7. (Previously Presented) The electrochemical plating apparatus of claim 6, wherein the microprocessor-type controller is configured to close the selectively actuated check valve in the fluid supply line and open the bleed line to drain a portion of the plating cell.

8. (Original) The electrochemical plating apparatus of claim 7, wherein the controller is configured to drain a portion of the plating cell during non-processing time periods by opening a selectively actuated bleed valve positioned in the bleed line.

9-27. (Canceled)

28. (Previously Presented) An electrochemical plating apparatus, comprising:
a plating cell configured to contain a plating bath below an overflow outlet;
a substrate support member positioned in the plating cell and configured to contact a substrate with the plating bath;
a fluid supply line in fluid communication with the plating cell;
an anode in the plating cell; and
a bleed line in fluid communication with the plating cell at a position in the plating cell between the overflow outlet and above the anode.

29. (Previously Presented) The electrochemical plating apparatus of claim 28, wherein the bleed line is configured to drain a portion of the plating bath from the plating cell, while leaving a sufficient amount of plating bath in the plating cell to immerse the anode.

30. (Previously Presented) The electrochemical plating apparatus of claim 28, further comprising a check valve in the fluid supply line.

31. (Previously Presented) The electrochemical plating apparatus of claim 30, wherein the check valve is selectively actuated.

32. (Previously Presented) The electrochemical plating apparatus of claim 28, further comprising a valve in the bleed line.
33. (Previously Presented) The electrochemical plating apparatus of claim 32, wherein the valve in the bleed line is selectively actuated.
34. (Previously Presented) The electrochemical plating apparatus of claim 28, further comprising a microprocessor-type controller configured to regulate operational characteristics of the electrochemical plating apparatus.
35. (Previously Presented) The electrochemical plating apparatus of claim 34, further comprising a valve in the fluid supply line, wherein the microprocessor-type controller is configured to close the valve in the fluid supply line and open the bleed line to drain a portion of the plating bath from the plating cell.
36. (Previously Presented) The electrochemical plating apparatus of claim 28, wherein the microprocessor-type controller is configured to drain a portion of the plating bath from the plating cell during non-processing time periods by opening a selectively actuated bleed valve positioned in the bleed line.